

IN THE CLAIMS:

Please add new claim 21 as follows:

1. (Previously Presented) A method for intersection, comprising:
checking an intersection network to create a predetermined intersection based on vehicle position information, the predetermined intersection comprising an approach road on which the vehicle is presently located and a plurality of departing roads;
creating a turn guide arrow to be displayed on the intersection; and
simultaneously displaying the intersection and the turn guide arrow such that an approach road having a predetermined angle from due north is placed on a vertical line, wherein the shape of the turn guide arrow corresponds to an angle between the approach road and one of the plurality of departing roads.
2. (Previously presented) The method of claim 1, wherein the step of creating the predetermined intersection comprises:
calculating an approaching angle of the approach road, departing angles of a plurality of departing roads connected to the approach road, and angles between the approach road and each of the plurality of departing roads;
vertically placing the approach road; and
representing the plurality of departing roads according to the calculated angles between the approach road and each of the plurality of departing roads.
3. (Previously presented) The method of claim 2, further comprising storing the approaching angle, the departing angle, and the angles between the approach road and each of the plurality of departing roads.
4. (Previously presented) The method of claim 2, wherein the plurality of departing roads are represented according to a trigonometric function value calculated using a trigonometric function table.

5. (Previously presented) The method of claim 1, wherein creating the turn guide arrow comprises:

arranging a basic arrow, the basic arrow providing with a lower body, a center circle, an upper body and a head, a width of the center circle identical to a width of the upper body and the lower body;

if a vehicle is guided by selecting one of the plurality of departing roads, calculating a rotation angle by using the angle between the approach road and the selected departing road; and

rotating the upper body and the head according to the calculated rotation angle.

6. (Previously presented) The method of claim 5, wherein the rotation angle is an angle obtained by subtracting 180° from the angle between the approach road and the selected departing road.

7. (Previously presented) The method of claim 5, further comprising converting the rotation angle into a positive number.

8. (Previously presented) The method of claim 7, wherein 360° is added to the rotation angle if the rotation angle is a negative number.

9. (Previously presented) The method of claim 5, further comprising matching a center of the rotated arrow with a center of the intersection.

10. (Previously presented) An apparatus for intersection guidance, comprising:

means for checking an intersection network to create a predetermined intersection based on vehicle position information, the predetermined intersection comprising an approach road on which the vehicle is presently located and a plurality of departing roads;

means for creating a turn guide arrow to be displayed on the intersection; and

means for simultaneously displaying the intersection and the turn guide arrow such that an approach road having a predetermined angle from due north is placed on a vertical line,

wherein the shape of the turn guide arrow corresponds to an angle between the approach road and one of the plurality of departing roads.

11. (Previously presented) The apparatus of claim 10, wherein the means for generating the intersection comprises:

means for calculating an approaching angle of the approach road, a departing angle of a plurality of departing roads connected to the approach road, and angles between the approach road and each of the plurality of departing roads from a predetermined set direction;

means for vertically placing the approach road; and

means for representing the plurality of departing roads according to the calculated rotation angles between the approach road and each of the plurality of departing roads from the vertically placed approach road.

12. (Previously presented) The apparatus of claim 11, further comprising a means for storing the approaching angle, the departing angle, and the angles between the approach road and each of the plurality of departing roads.

13. (Previously presented) The apparatus of claim 10, wherein the means for creating the turn guide arrow comprises:

means for arranging a basic arrow, the basic arrow being providing with a lower body, a center circle, an upper body and a head;

means for calculating a rotation angle by using the angle between the approach road and a selected departing road if the vehicle is guided by selecting one of the plurality of departing roads; and

means for rotating the upper body and the head according to the calculated rotation angle.

14. (Original) The apparatus of claim 13, wherein the rotation angle is an angle obtained by subtracting 180° from the angle between the approach road and the selected departing road.

15. (Original) The apparatus of claim 13, further comprising a means for converting the rotation angle into a positive number.

16. (Original) The apparatus of claim 15, wherein 360° is added to the rotation angle if the rotation angle is a negative number.

17. (Previously presented) The apparatus of claim 13, further comprising means for matching a center of the rotated arrow with a center of the intersection.

18. (Previously presented) A navigation system comprising:
means for storing data necessary to create an intersection;
means for storing basic arrow data;
a memory storing a coordinate of an arrow for indicating a direction and a trigonometric function table;
a central processing unit for intersection guidance with a turn guide arrow by using data necessary to create the intersection, the basic arrow data and the trigonometric function table, the central processing unit adapted to check an intersection network to create a predetermined intersection based on vehicle position information, the vehicle position information extracted from the data necessary to create the intersection, the predetermined intersection comprising an approach road on which the vehicle is presently located and a plurality of departing roads;
means for displaying the intersection with the turn guide arrow; and
means for creating the turn guide arrow to be displayed on the created intersection such that an approach road having a predetermined angle from due north is placed on a vertical line,
wherein the shape of the turn guide corresponds to an angle between the approach road and one of the plurality of departing roads.

19. (Previously presented) The navigation system of claim 18, wherein the means for storing the basic arrow data includes a lower body, a center circle, an upper body and a head, a width of the center circle identical to a width of the upper body and the lower body.

20. (Previously presented) The navigation system of claim 18, wherein the widths of the lower body, center circle, upper body and head are adjustable and colors distinguish the lower body, center circle, upper body and head from each other.

21. (New) A method for guiding an intersection, comprising:
checking an intersection network to create a predetermined intersection based on vehicle position information;
creating a turn guide arrow to be displayed on the intersection; and
simultaneously displaying the intersection and the turn guide arrow created thereon,

wherein creating the turn guide arrow comprises arranging a basic arrow, the basic arrow provided with a lower body, an upper body and a head, calculating a rotation angle by using the angle between the approach road and a selected departing road when a vehicle is guided by selecting one of the departing roads and rotating the upper body and the head according to the calculated rotation angle.